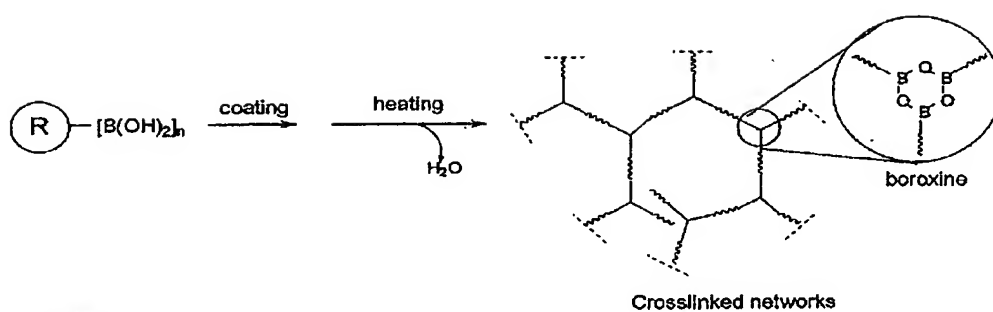
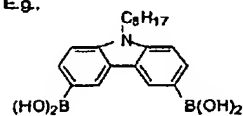


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 $n = \text{or} > 1;$ 

R = organic or organometallic complex moiety including oligomer and polymer.

E.g.



(CzBA)

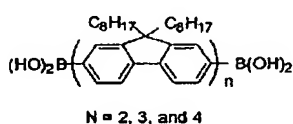
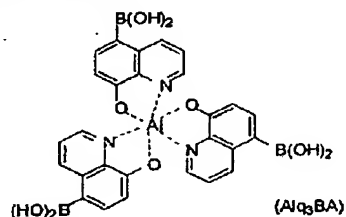
 $(F_nBA)$  $(Alq_3BA)$ 

Fig. 1

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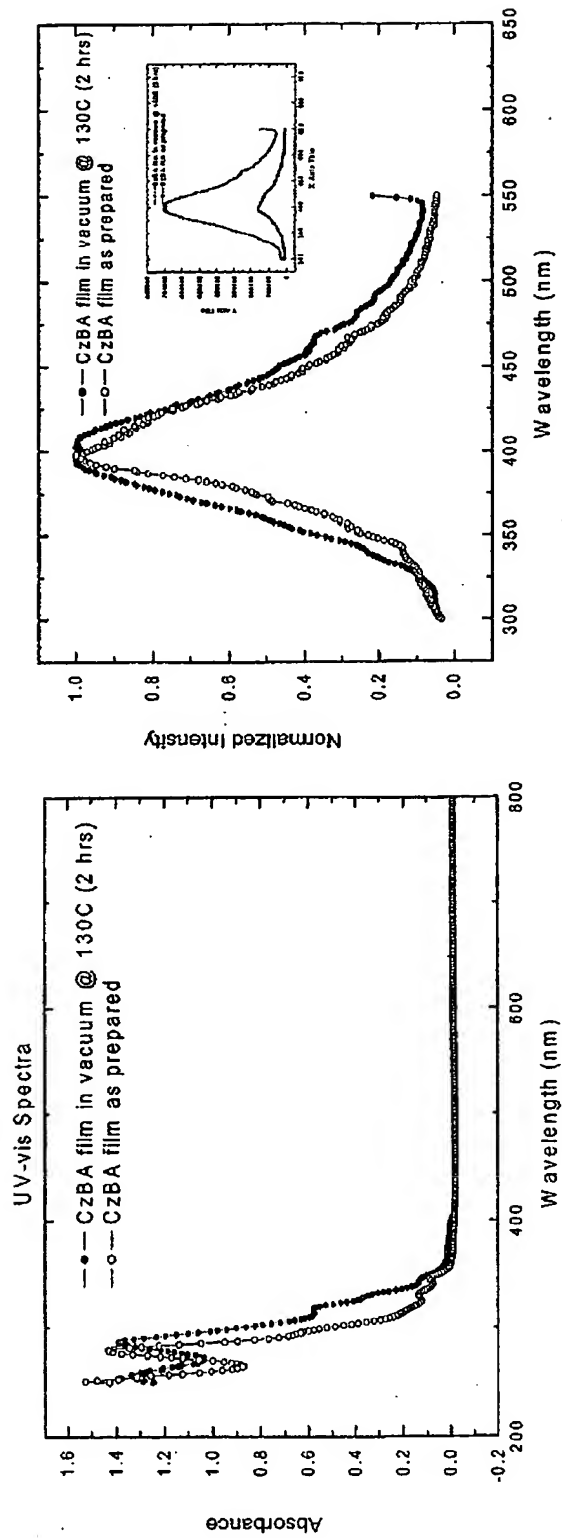


Fig. 2

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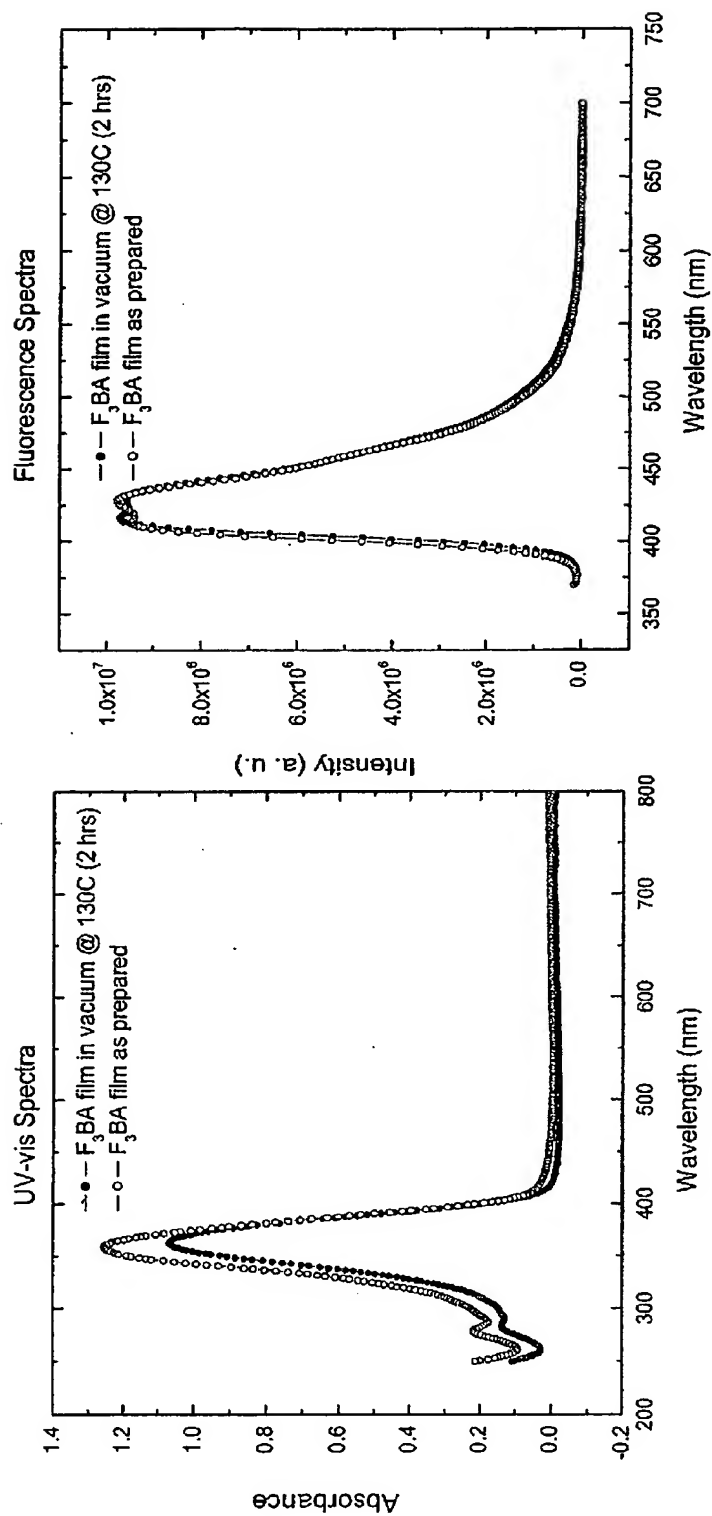


Fig. 3

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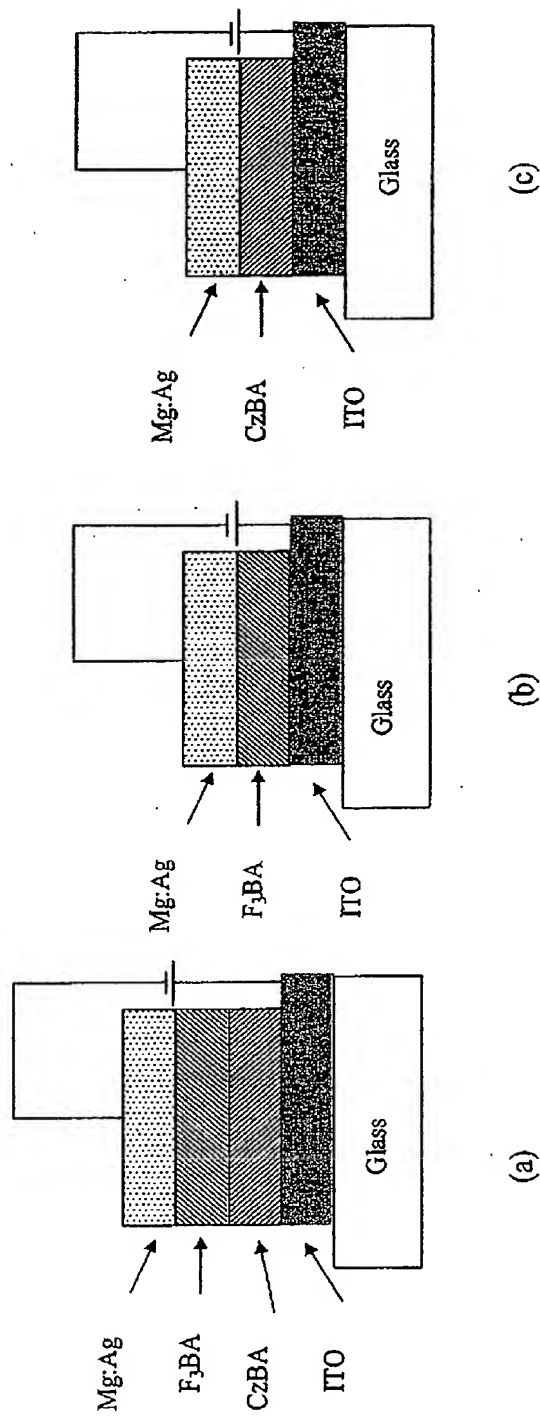


Fig. 4

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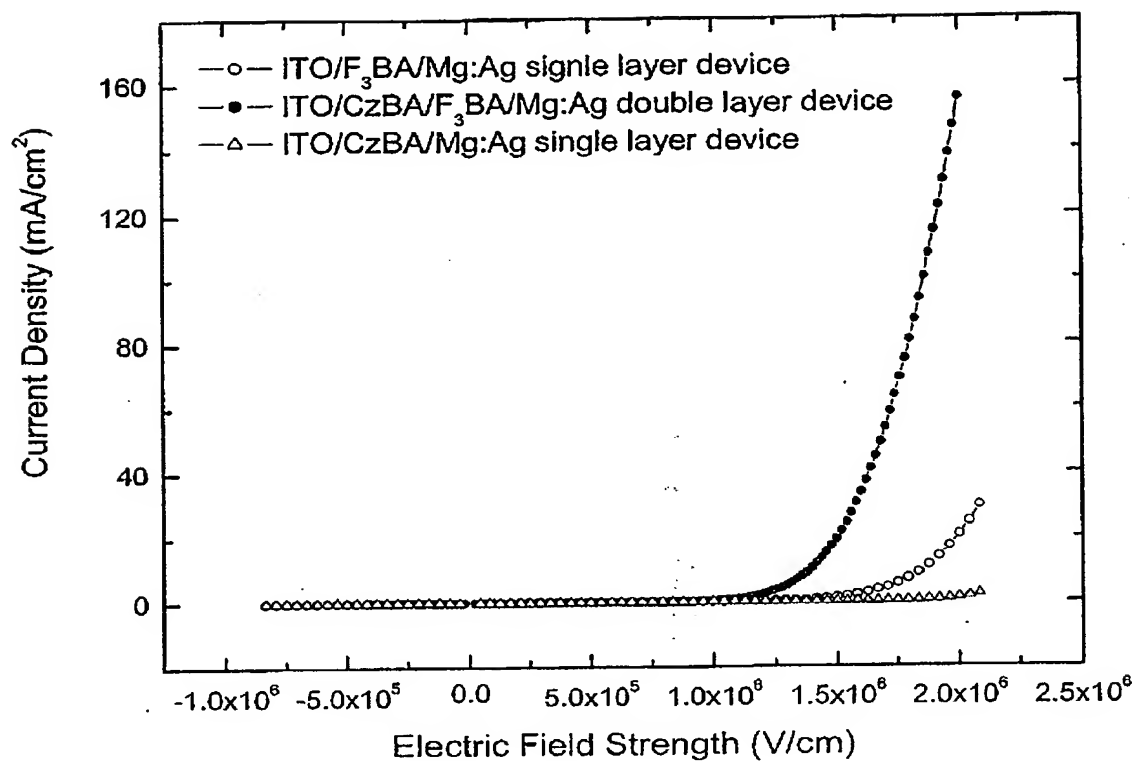


Fig. 5

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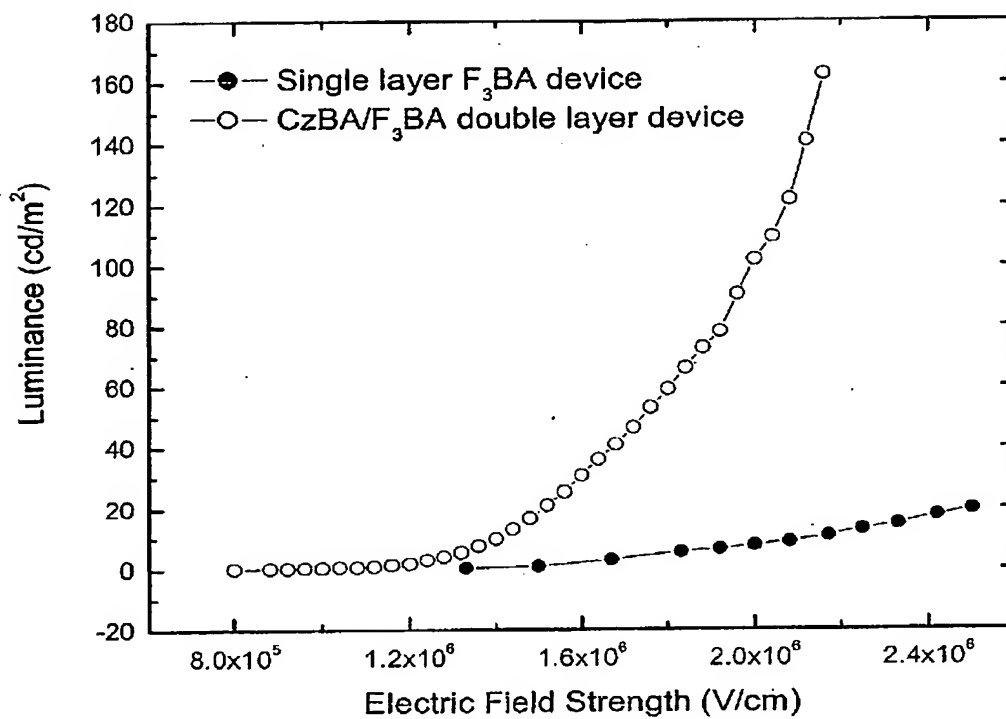


Fig. 6

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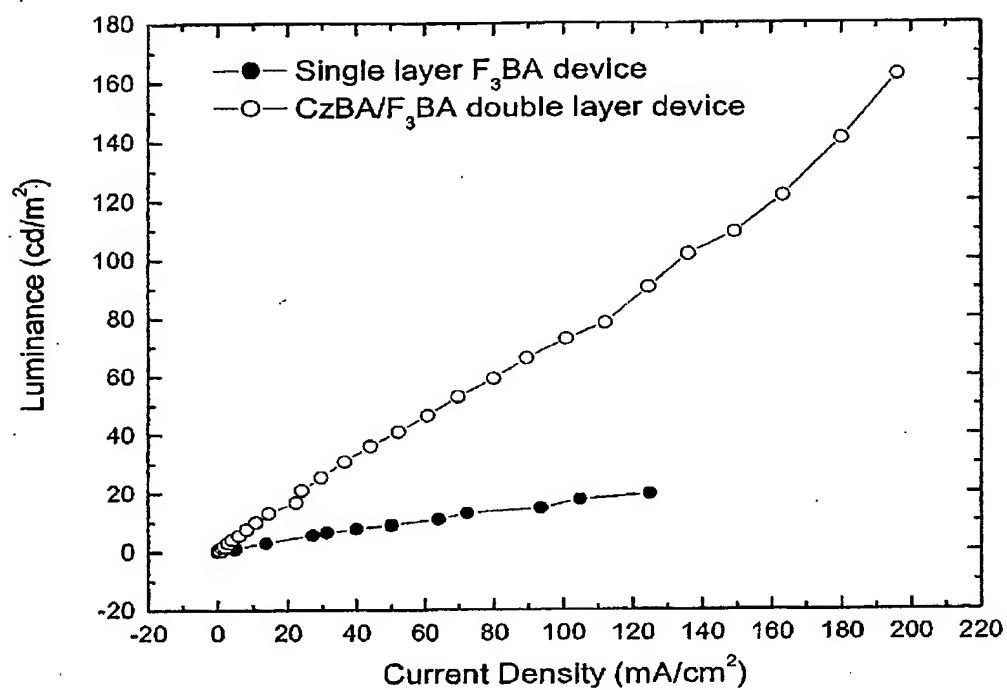


Fig. 7

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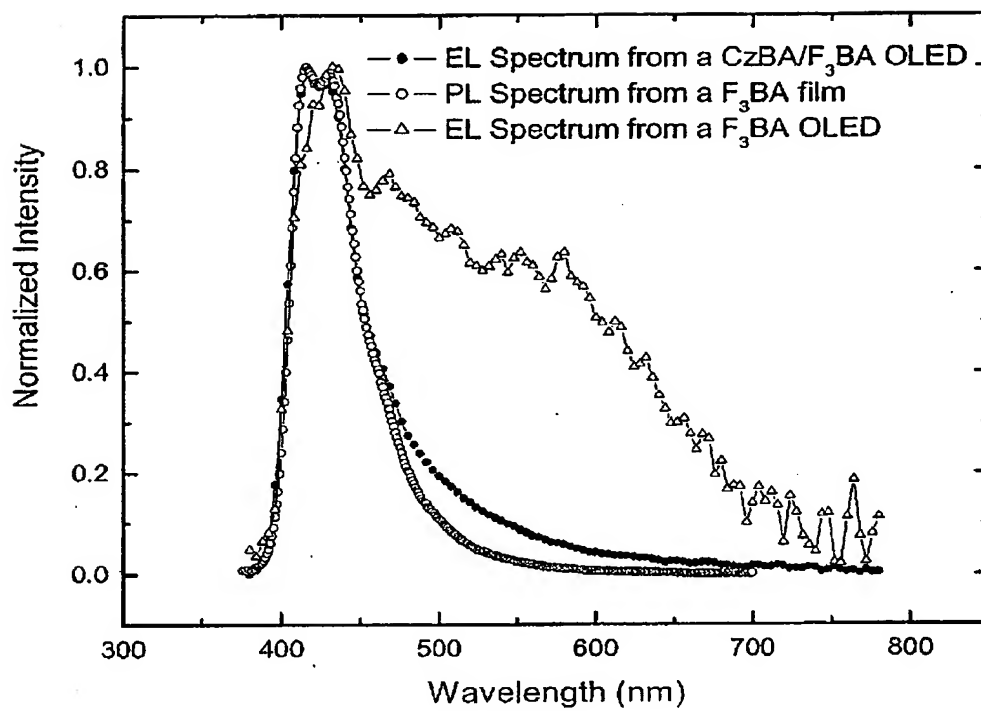


Fig. 8



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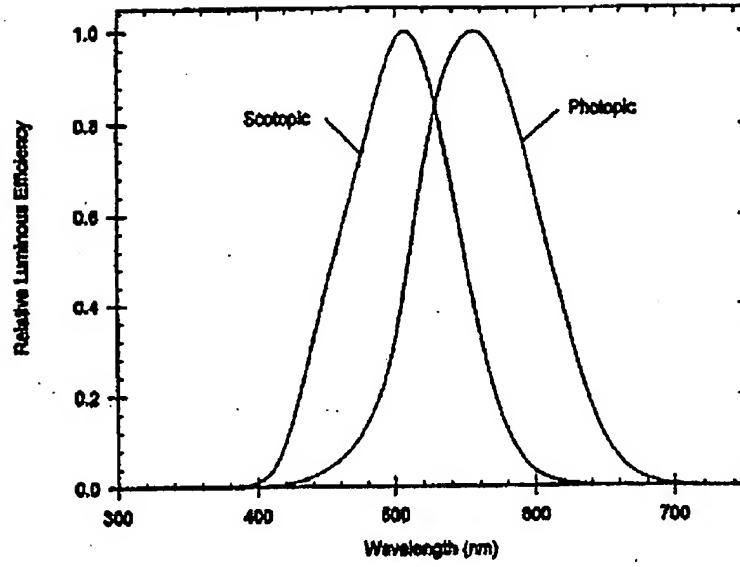
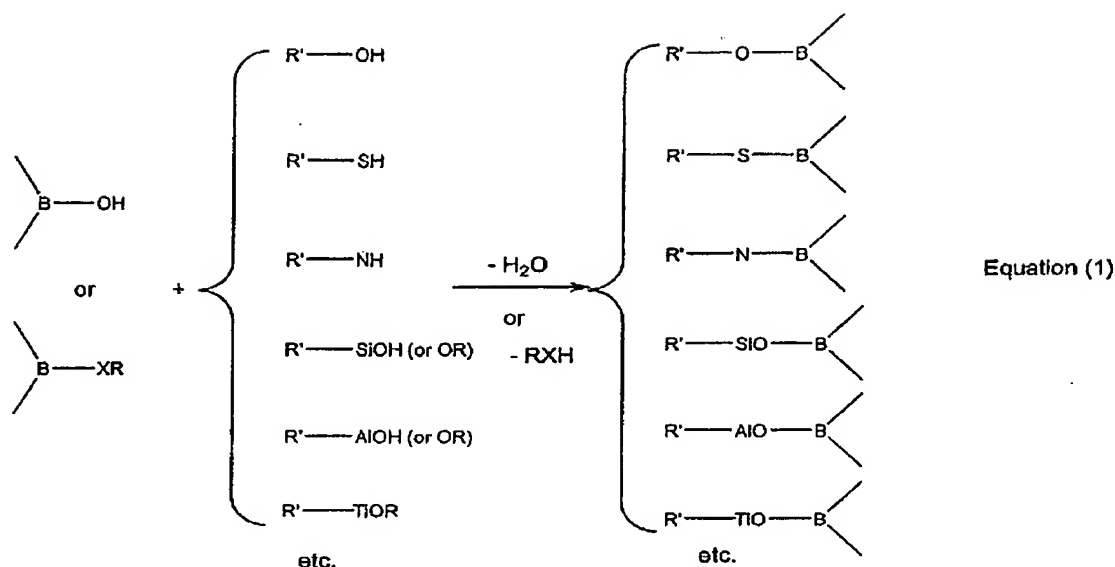
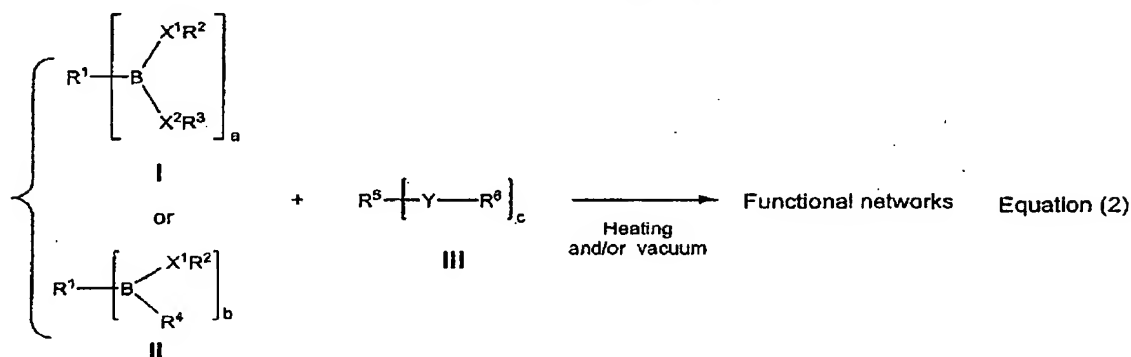


Fig. 9

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wherein, X = O, S, N; R and R' = alkyl, aryl, or any other organic and inorganic structures or groups.



wherein,

R<sup>1</sup>, R<sup>4</sup>, and R<sup>5</sup> = alkyl, aryl, or other groups, either organic or inorganic, but at least one of them contains functionality; they can be of small molecular weights or high molecular weights.

R<sup>2</sup>, R<sup>3</sup>, R<sup>6</sup> = H, alkyl, aryl, they may be same or different, but at least one of them is H.

X<sup>1</sup>, X<sup>2</sup> = O, S, or N, they may be same or different.

Y = O, S, N (or NH), SiO, AlO, TiO, etc.

a, b, c are equal to or larger than one, but at least either a (or b) or c is larger than one.

Fig. 10

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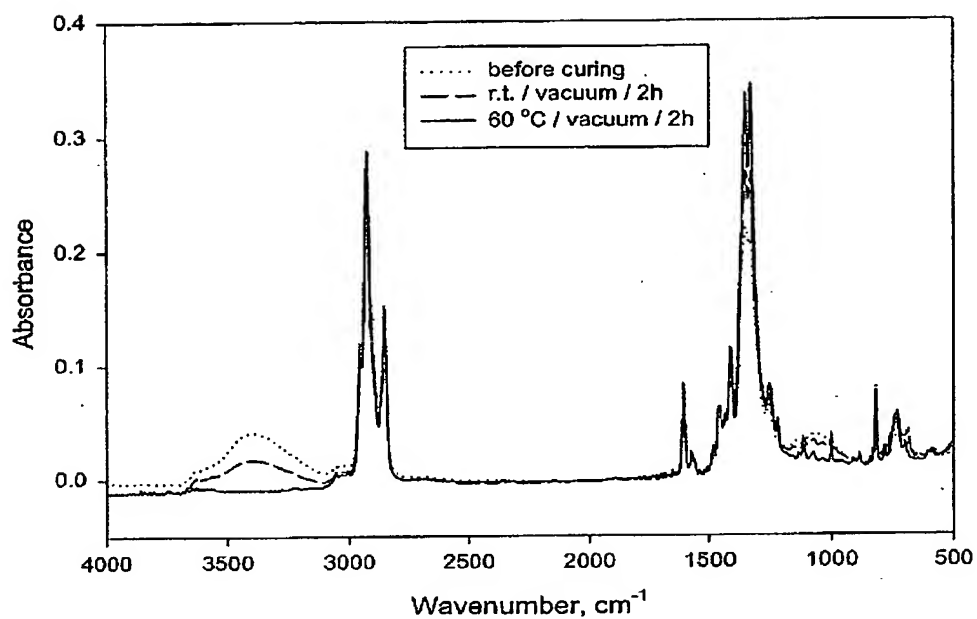


Fig. 11

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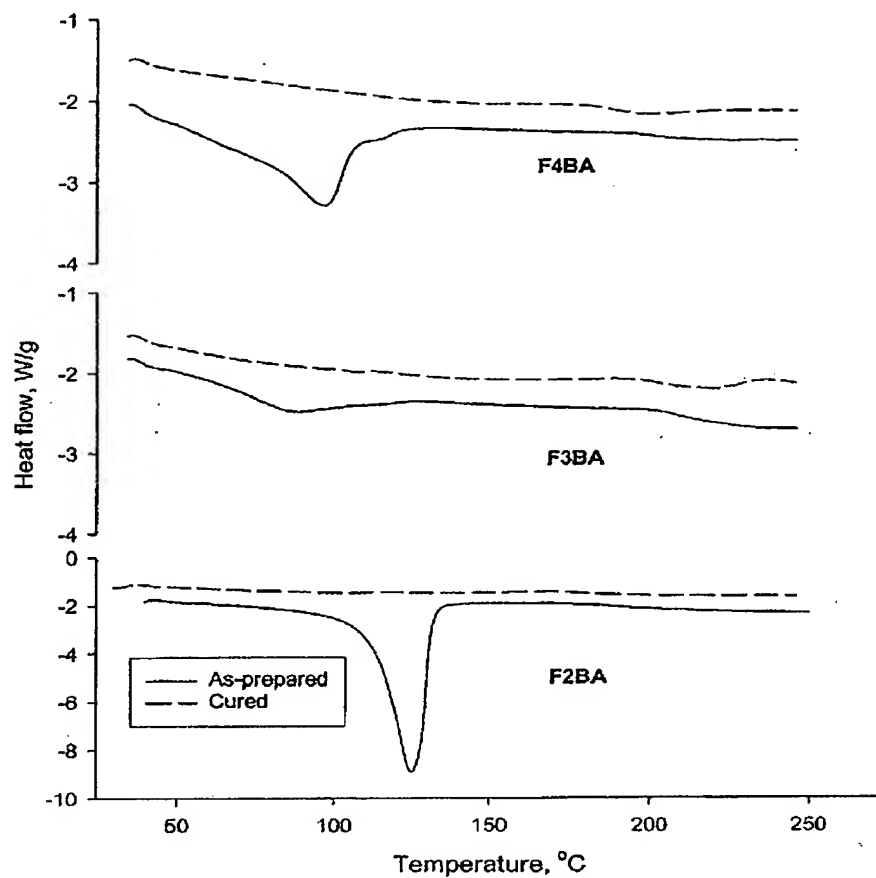


Fig. 12

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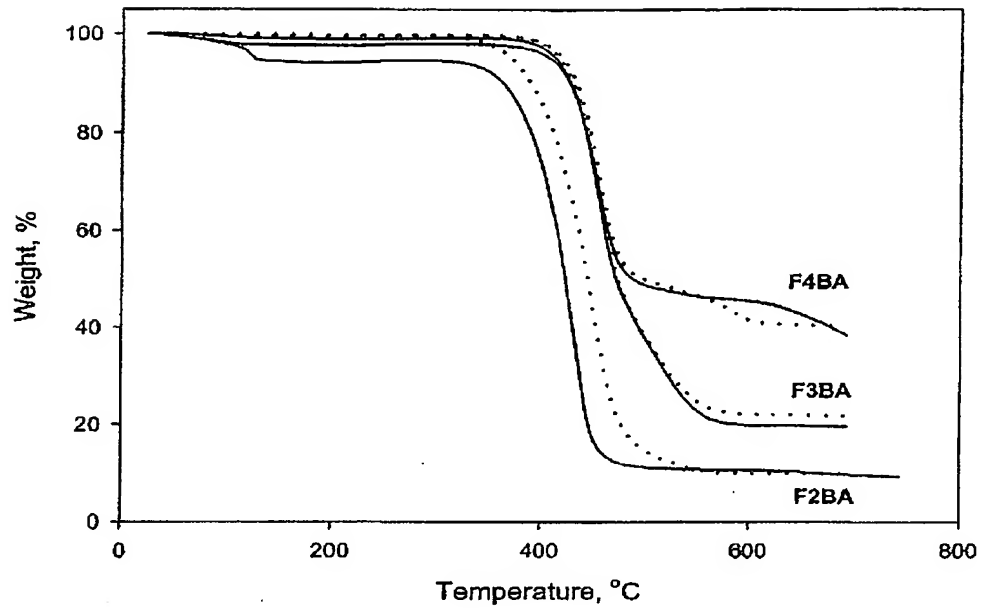


Fig. 13

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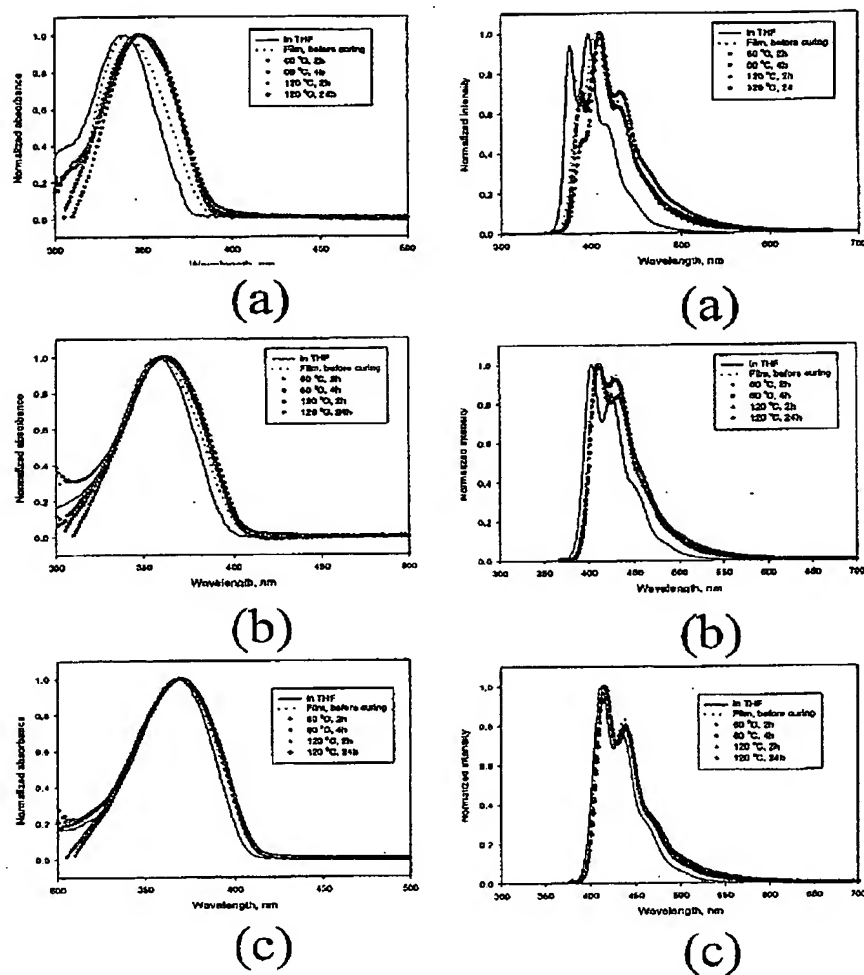


Fig. 14

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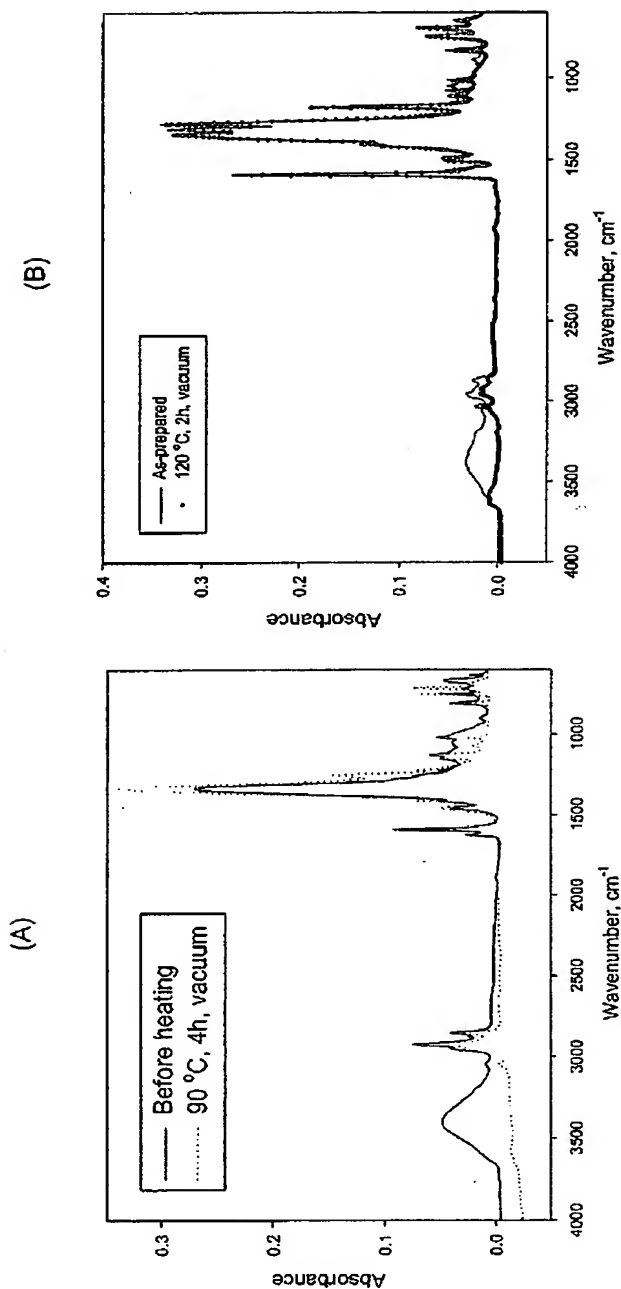


Fig. 15

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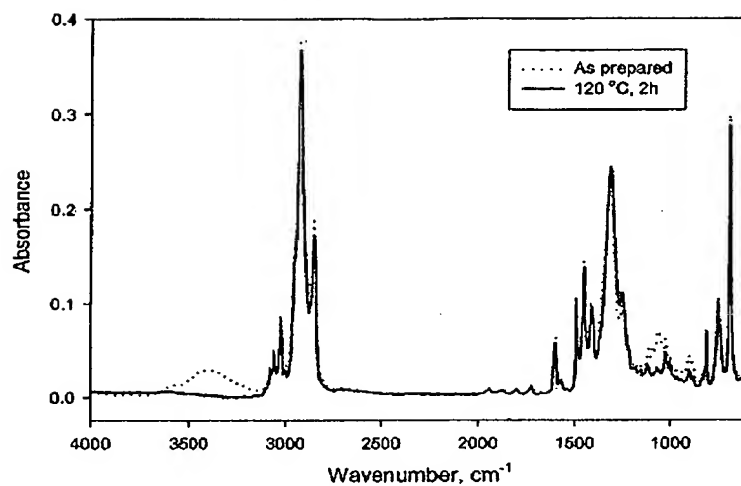


Fig. 16

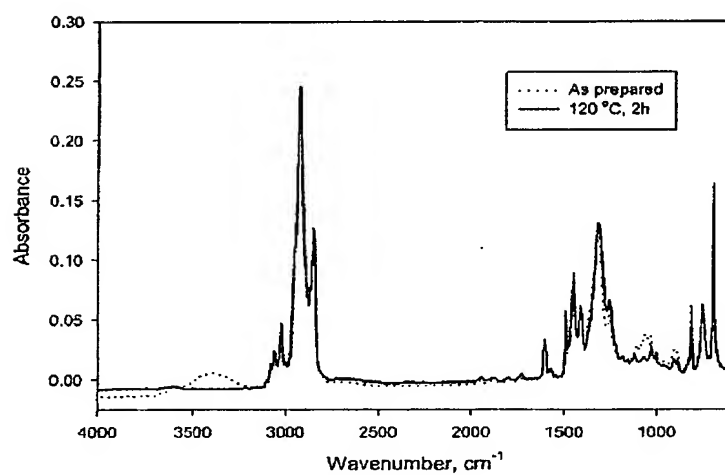


Fig. 17



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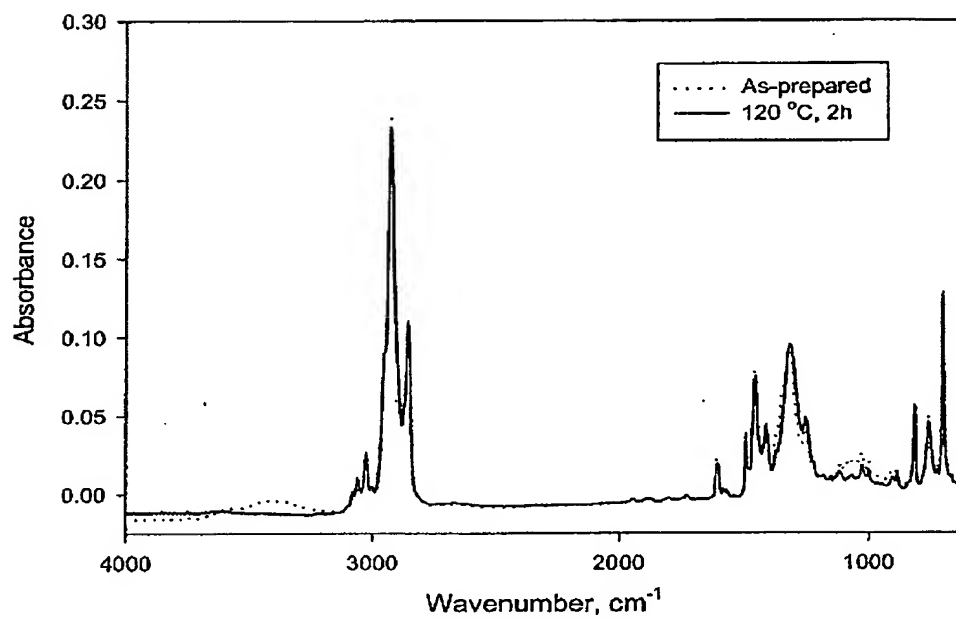


Fig. 18

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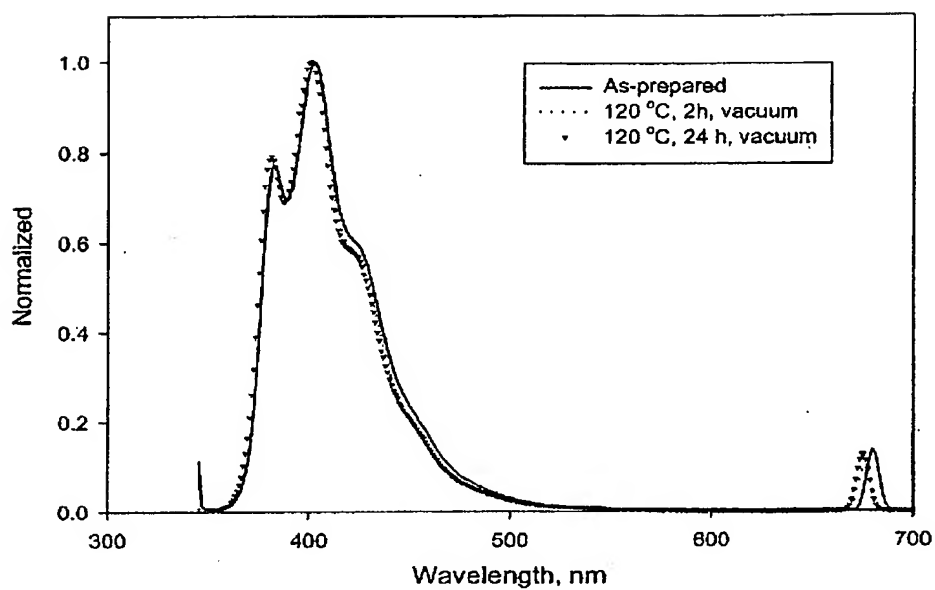


Fig. 19

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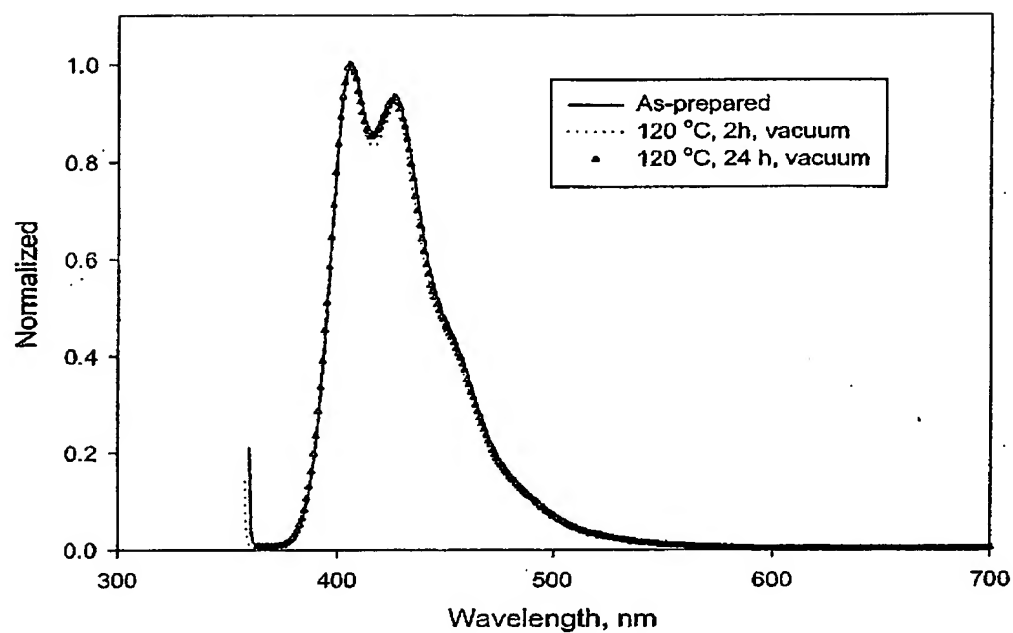


Fig. 20

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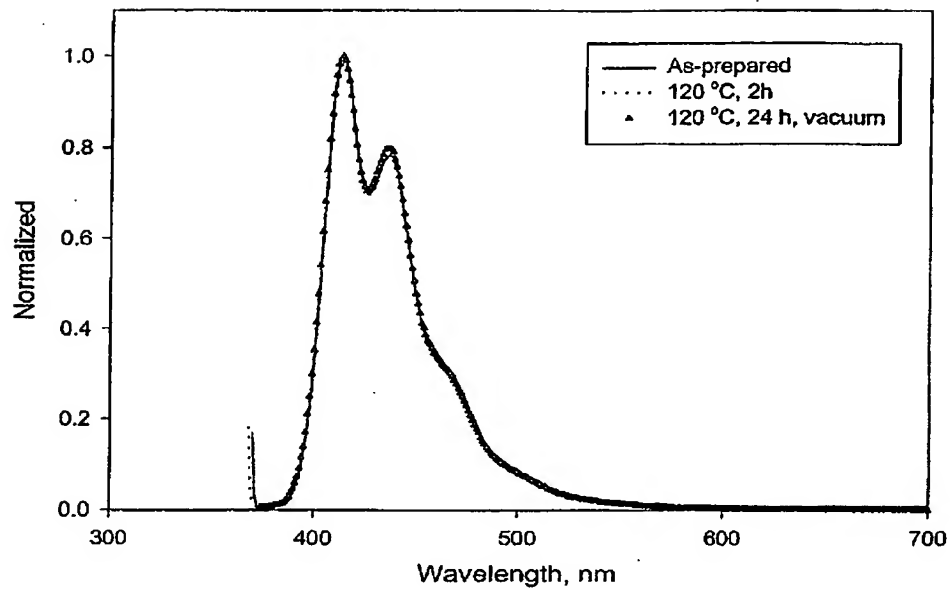


Fig. 21

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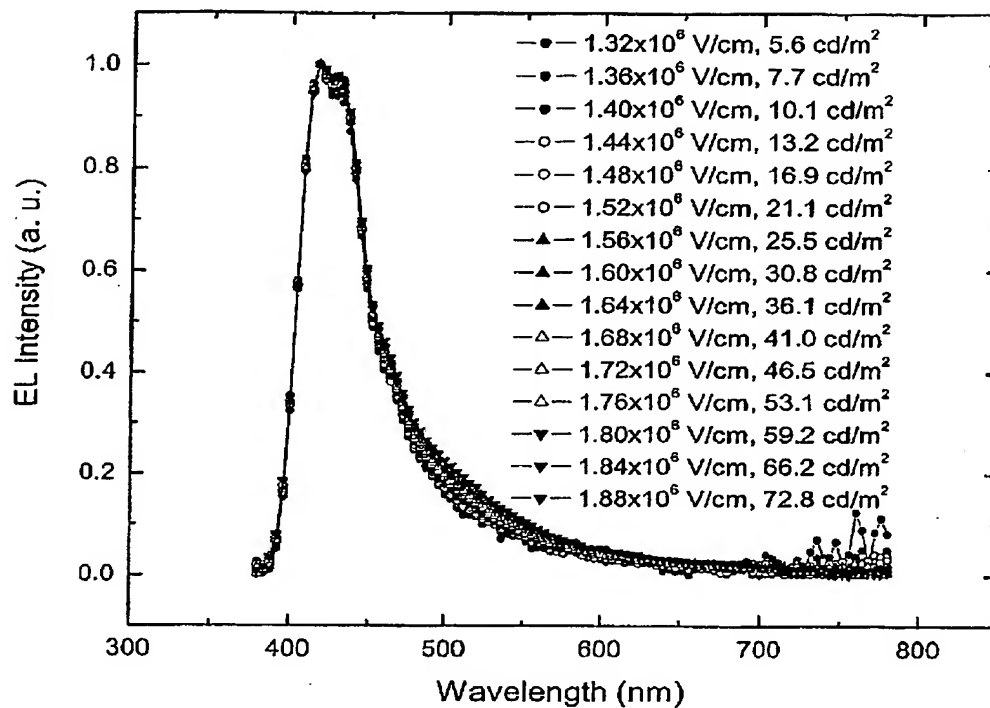


Fig. 22